

## CLAIMS

What is claimed is:

1. A spacecraft radiator system (for use on a spacecraft having a body and a plurality of solar arrays, the system comprising:

first and second opposite facing payload radiators;

first and second opposite facing deployable radiators; and

5 one or more coupling heat pipes that cross couple opposite facing payload and deployable radiators.

2. The spacecraft radiator system recited in Claim 1 wherein the one or more coupling heat pipes comprise loop heat pipes.

3. A spacecraft comprising:

a body;

a plurality of solar arrays;

a spacecraft radiator system comprising:

5 first and second opposite facing payload radiators;

first and second opposite facing deployable radiators; and

one or more coupling heat pipes that cross couple opposite facing payload and deployable radiators.

4. The spacecraft recited in Claim 3 wherein the one or more coupling heat pipes comprise loop heat pipes.

5. A spacecraft heat dissipation method comprising the steps of:

configuring a spacecraft to have a body, a plurality of solar arrays, first and second opposite facing payload radiators, first and second opposite facing deployable radiators, and loop heat pipes cross coupling opposite facing payload and deployable radiators;

launching the spacecraft into orbit; and

when in orbit, cross coupling heat coupled to the respective payload radiators to the opposite facing deployable radiator.

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